

Rec'd PCT/PTO 21 JAN 2005

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

ATTORNEY DOCKET NO.:

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

HEAT EXCHANGER AND REACTOR AND RADIATION HEATER USING THE SAME

the specification of which:

is attached hereto; or

was filed as United States application Serial No. _____ on _____ and was amended on _____ (if applicable); or

PCT/JP03/09202

was filed as PCT international application Number _____ on _____ and was amended under PCT Article 19
on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the U.S. Patent and Trademark Office information which is material to the patentability of claims presented in this application in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate or §365(a) of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN APPLICATION(S):

COUNTRY (if PCT, indicate PCT)	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED
Japan	P.2002-212210	22/July/2002	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Japan	P.2003-274039	14/July/2003	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

Combined Declaration For Patent Application and Power of Attorney - (Continued)
(includes Reference to PCT International Applications)

ATTORNEY DOCKET NO.:

I hereby claim the benefits under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

U.S. PROVISIONAL APPLICATIONS

<u>U.S. PROVISIONAL APPLICATION NO.</u>	<u>U.S. FILING DATE</u>

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or §365(c) of any PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to the patentability of claims presented in this application in accordance with Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT

<u>U.S. APPLICATIONS</u>		<u>STATUS (Check One)</u>		
<u>U.S. APPLICATION NO.</u>	<u>U.S. FILING DATE</u>	<u>PATENTED</u>	<u>PENDING</u>	<u>ABANDONED</u>

POWER OF ATTORNEY: As a named inventor, I hereby appoint the registered practitioners of Morgan, Lewis & Bockius LLP included in the Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and direct that all correspondence be addressed to that Customer Number.

Customer Number: 009629

Direct Telephone Calls To:
(name and telephone number)

Robert J. Gaybrick
202-467-7501

Combined Declaration For Patent Application and Power of Attorney - (Continued)
(includes Reference to PCT International Applications)

ATTORNEY DOCKET NO.:

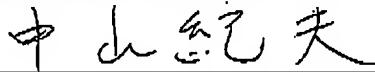
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

FULL NAME OF SOLE OR FIRST INVENTOR	<u>Akira OBUCHI</u>	
RESIDENCE & CITIZENSHIP	<u>Ibaraki, Japan JPX</u>	COUNTRY OF CITIZENSHIP Japan
POST OFFICE ADDRESS	c/o National Institute of Advanced Industrial Science and Technology, 16-1, Onogawa Tsukuba-shi, Ibaraki 305-8569 Japan	
FIRST OR SOLE INVENTOR'S SIGNATURE	<u>Akira Obuchi 小淵 勘</u>	DATE January 12, 2005
FULL NAME OF SECOND INVENTOR	<u>Junko UCHISAWA</u>	
RESIDENCE & CITIZENSHIP	<u>Ibaraki, Japan JPX</u>	COUNTRY OF CITIZENSHIP Japan
POST OFFICE ADDRESS	c/o National Institute of Advanced Industrial Science and Technology 16-1, Onogawa Tsukuba-shi, Ibaraki 305-8569 Japan	
SECOND INVENTOR'S SIGNATURE	<u>内澤潤子</u>	DATE January 12, 2005
FULL NAME OF THIRD INVENTOR	<u>Akihiko OOI</u>	
RESIDENCE & CITIZENSHIP	<u>Ibaraki, Japan JPX</u>	COUNTRY OF CITIZENSHIP Japan
POST OFFICE ADDRESS	c/o National Institute of Advanced Industrial Science and Technology 16-1, Onogawa Tsukuba-shi, Ibaraki 305-8569 Japan	
THIRD INVENTOR'S SIGNATURE	<u>大井 伸</u>	DATE January 12, 2005

Listing of Inventors Continued on attached page(s) Yes No

Combined Declaration For Patent Application and Power of Attorney - (Continued)
 (includes Reference to PCT International Applications)

ATTORNEY DOCKET NO.:

FULL NAME OF FOURTH INVENTOR	<u>Tetsuya NAMBA</u>	
RESIDENCE & CITIZENSHIP	<u>Ibaraki, Japan JPX</u>	COUNTRY OF CITIZENSHIP Japan
POST OFFICE ADDRESS	c/o National Institute of Advanced Industrial Science and Technology, 16-1, Onogawa Tsukuba-shi, Ibaraki 305-8569 Japan	
FOURTH INVENTOR'S SIGNATURE		
	DATE January 12, 2005	
FULL NAME OF FIFTH INVENTOR	<u>Norio NAKAYAMA</u>	
RESIDENCE & CITIZENSHIP	<u>Ibaraki, Japan JPX</u>	COUNTRY OF CITIZENSHIP Japan
POST OFFICE ADDRESS	c/o National Institute of Advanced Industrial Science and Technology, 16-1, Onogawa Tsukuba-shi, Ibaraki 305-8569 Japan	
FIFTH INVENTOR'S SIGNATURE		
	DATE January 12, 2005	
FULL NAME OF SIXTH INVENTOR	<u>Atsushi OGATA</u>	
RESIDENCE & CITIZENSHIP	<u>Ibaraki, Japan JPX</u>	COUNTRY OF CITIZENSHIP Japan
POST OFFICE ADDRESS	c/o National Institute of Advanced Industrial Science and Technology, 16-1, Onogawa Tsukuba-shi, Ibaraki 305-8569 Japan	
SIXTH INVENTOR'S SIGNATURE		
	DATE January 12, 2005	
FULL NAME OF SEVENTH INVENTOR		
RESIDENCE & CITIZENSHIP		
POST OFFICE ADDRESS		
SEVENTH INVENTOR'S SIGNATURE		

Listing of Inventors Continued on attached page(s) Yes No